

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/GB 00/ 02491</b>	International filing date (day/month/year) <b>23/06/2000</b>	(Earliest) Priority Date (day/month/year) <b>28/06/1999</b>
Applicant  <b>UNIVERSITY COLLEGE LONDON</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of Invention is lacking** (see Box II).

4. With regard to the **title**,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

**OPTICAL FIBRE PROBE FOR PHOTOACOUSTIC MATERIAL ANALYSIS**

5. With regard to the **abstract**,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

1



as suggested by the applicant.



None of the figures.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G01N21/17 A61B5/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01N A61B G01D G01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A ✓	BEARD P C ET AL: "OPTICAL FIBER PHOTOACOUSTIC-PHOTOTHERMAL PROBE" OPTICS LETTERS, US, OPTICAL SOCIETY OF AMERICA, WASHINGTON, vol. 23, no. 15, 1 August 1998 (1998-08-01), pages 1235-1237, XP000783073 ISSN: 0146-9592 cited in the application the whole document --- -/--	1

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## ° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

25 October 2000

Date of mailing of the international search report

02/11/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Navas Montero, E

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A ✓	BEARD P C ET AL: "CHARACTERIZATION OF POST MORTEM ARTERIAL TISSUE USING TIME-RESOLVED PHOTOACOUSTIC SPECTROSCOPY AT 436, 461 AND 532 NM" PHYSICS IN MEDICINE AND BIOLOGY, GB, TAYLOR AND FRANCIS LTD. LONDON, vol. 42, no. 1, 1997, pages 177-198, XP000639376 ISSN: 0031-9155 cited in the application the whole document ---	6
A ✓	US 4 567 769 A (BARKHOUDARIAN SARKIS) 4 February 1986 (1986-02-04) the whole document ---	1
A ✓	RAO Y J ET AL: "PROTOTYPE FIBER-OPTIC BASED FIZEAU MEDICAL PRESSURE SENSOR THAT USES COHERENCE READING" OPTICS LETTERS, US, OPTICAL SOCIETY OF AMERICA, WASHINGTON, vol. 18, no. 24, 15 December 1993 (1993-12-15), pages 2153-2155, XP000416787 ISSN: 0146-9592 the whole document -----	6

# INTERNATIONAL SEARCH REPORT

### Information on patent family members

International Application No

PCT/GB 00/02491

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4567769 A	04-02-1986	DE 3511329 A	02-10-1986
		FR 2579762 A	03-10-1986
		GB 2172994 A, B	01-10-1986
<hr/>			



# The Patent Office

40

Application No: GB 9804828.3

Examiner: Grant Bedford

Claims searched: 1 to 55

Date of search: 22 June 1998

## Patents Act 1977

### Search Report under Section 17

#### Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.P): G1G (GPB)

Int Cl (Ed.6): G01N (21/17 33/483 33/487 33/49), A61B (5/00 5/14)

Other: Online: WPI INSPEC

#### Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	EP 0282234 A1 (DOWLING) See figure 4 and page 8 lines 1 to 3 in particular.	1 and 14 at least
X,E	EP 0829224 A2 (COLUMBUS) See figure 2 in particular.	1 and 14 at least
X,E	EP 0829225 A2 (COLUMBUS) See figure 1 in particular.	1 and 14 at least
X	Medical & Biological Engineering & Computing, Vol. 31(3), pp. 284-290, May 1993	1 and 14 at least
X	Physics in medicine and biology, Vol. 38(12), pp. 1911-1922, Dec 1993	1 and 14 at least

X Document indicating lack of novelty or inventive step  
Y Document indicating lack of inventive step if combined with one or more other documents of same category.

A Document indicating technological background and/or state of the art.  
P Document published on or after the declared priority date but before the filing date of this invention.



— Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

## INTERNATIONAL SEARCH REPORT

Int'l Application No

PCT/GB 00/02491

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 G01N21/17 A61B5/00

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01N A61B G01D G01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

## ° Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
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- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*G\* document member of the same patent family

Date of the actual completion of the international search

25 October 2000

Date of mailing of the international search report

02/11/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Navas Montero, E

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/02491

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>BEARD P C ET AL: "CHARACTERIZATION OF POST MORTEM ARTERIAL TISSUE USING TIME-RESOLVED PHOTOACOUSTIC SPECTROSCOPY AT 436, 461 AND 532 NM"</p> <p>PHYSICS IN MEDICINE AND BIOLOGY, GB, TAYLOR AND FRANCIS LTD. LONDON, vol. 42, no. 1, 1997, pages 177-198, XP000639376</p> <p>ISSN: 0031-9155</p> <p>cited in the application</p> <p>the whole document</p>	6
A	<p>US 4 567 769 A (BARKHOUDARIAN SARKIS)</p> <p>4 February 1986 (1986-02-04)</p> <p>the whole document</p>	1
A	<p>RAO Y J ET AL: "PROTOTYPE FIBER-OPTIC BASED FIZEAU MEDICAL PRESSURE SENSOR THAT USES COHERENCE READING"</p> <p>OPTICS LETTERS, US, OPTICAL SOCIETY OF AMERICA, WASHINGTON, vol. 18, no. 24, 15 December 1993 (1993-12-15), pages 2153-2155, XP000416787</p> <p>ISSN: 0146-9592</p> <p>the whole document</p>	6



## INTERNATIONAL SEARCH REPORT

### Information on patent family members

**International Application No**

PCT/GB 00/02491

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4567769 A	04-02-1986	DE 3511329 A	02-10-1986
		FR 2579762 A	03-10-1986
		GB 2172994 A,B	01-10-1986

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US97/01815

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) : A61B 05/00, 08/13

US CL : 128/653.1

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 128/633, 653.1, 664, 665; 150/340, 341.1, 351; 356/318, 376, 432; 378/21, 22, 64, 86, 87, 901

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,710,030 A (TAUC et al) 01 December 1987, Abstract.	1, 2, 4-9, 11-16, 19, 20
Y	US 4,727,420 A (KOHDA et al) 23 February 1988, Abstract	1, 2, 4-9, 11-16, 19, 20
Y, E	US 5,602,894 A (BARDASH) 11 February 1997, Abstract.	2

☒

Further documents are listed in the continuation of Box C.

☐

See patent family annex.

•	Special categories of cited documents:	•T	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
•A	document defining the general state of the art which is not considered to be of particular relevance		
•E	earlier document published on or after the international filing date	•X	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
•L	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	•Y	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
•O	document referring to an oral disclosure, use, exhibition or other means		
•P	document published prior to the international filing date but later than the priority date claimed	•&	document member of the same patent family

Date of the actual completion of the international search

14 APRIL 1997

Date of mailing of the international search report

07 MAY 1997

Name and mailing address of the ISA/US  
Commissioner of Patents and Trademarks

Authorized officer

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US97/01815

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,421,337 A (RICHARDS-KORTUM et al) 06 June 1995, Abstract.	8, 13-15
Y	US 5,398,685 A (WILK et al) 21 March 1995, col. 5, lines 24-28.	4, 7, 11, 16, 19
A, P	US 5,582,578 A (ZHONG et al) 10 December 1996, Abstract; and Fig. 2.	1-20

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 5 A61B17/22

**According to International Patent Classification (IPC) or to both national classification and IPC**

### B. FIELDS SEARCHED

**Minimum documentation searched (classification system followed by classification symbols)**

IPC 5 A61B G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

### C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO,A,92 07623 (C.R.BARD INC.) 14 May 1992 see the whole document ---	1,3
Y	WO,A,92 16140 (WINSTON T.R.) 1 October 1992 see the whole document ---	1-5
Y	PATENT ABSTRACTS OF JAPAN vol. 15, no. 252 (C-0844) 26 June 1991 & JP,A,30 082 482 (OLYMPUS OPTICAL CO.) see abstract ---	1-5
A	EP,A,0 329 492 (ANGELSEN ET AL.) 23 August 1989 see abstract; figures ---	1-5



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention.
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

**Date of the actual completion of the international search**

18 August 1994

Date of mailing of the international search report

23. 09. 94

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk

Authorized officer

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US,A,5 163 432 (UENO ET AL.) 17 November 1992 see the whole document	1,3
A	PATENT ABSTRACTS OF JAPAN vol. 15, no. 1337 (C-0862) 27 August 1991 & JP,A,315 031 242 (OLYMPUS OPTICAL CO.) see abstract	1

202050 1467001

## INTERNATIONAL SEARCH REPORT

Information on patent family members

Internat'l Application No

CT/GB 94/01276

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO-A-9207623	14-05-92	US-A- 5254112	19-10-93
		AU-A- 8946191	26-05-92
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WO-A-9216140	01-10-92	AU-A- 1924192	21-10-92
		EP-A- 0576607	05-01-94
-----			
EP-A-0329492	23-08-89	US-A- 4887605	19-12-89
		JP-A- 2005936	10-01-90
-----			
US-A-5163432	17-11-92	JP-A- 4075651	10-03-92
		JP-A- 4135555	11-05-92
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PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
US Department of Commerce  
United States Patent and Trademark  
Office, PCT  
2011 South Clark Place Room  
CP2/5C24  
Arlington, VA 22202  
ETATS-UNIS D'AMERIQUE  
in its capacity as elected Office

Date of mailing (day/month/year) 02 March 2001 (02.03.01)	
International application No. PCT/GB00/02491	Applicant's or agent's file reference
International filing date (day/month/year) 23 June 2000 (23.06.00)	Priority date (day/month/year) 28 June 1999 (28.06.99)
Applicant MILLS, Timothy, Noel et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:  
19 January 2001 (19.01.01)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB00/02491

## I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, pages:**

1-6 as originally filed

**Claims, No.:**

1-6 as originally filed

**Drawings, sheets:**

1/1 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:



1

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB00/02491

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☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims 1-6
	No: Claims
Inventive step (IS)	Yes: Claims 1-6
	No: Claims
Industrial applicability (IA)	Yes: Claims 1-6
	No: Claims



2. Citations and explanations  
**see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference NJE/G15233WO		<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB00/02491	International filing date (day/month/year) 23/06/2000	Priority date (day/month/year) 28/06/1999	
International Patent Classification (IPC) or national classification and IPC G01N21/17			
Applicant UNIVERSITY COLLEGE LONDON et al.			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"><li>I <input checked="" type="checkbox"/> Basis of the report</li><li>II <input type="checkbox"/> Priority</li><li>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li><li>IV <input type="checkbox"/> Lack of unity of invention</li><li>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li><li>VI <input type="checkbox"/> Certain documents cited</li><li>VII <input checked="" type="checkbox"/> Certain defects in the international application</li><li>VIII <input type="checkbox"/> Certain observations on the international application</li></ul>			
Date of submission of the demand 19/01/2001		Date of completion of this report 06.08.2001	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized officer Politsch, E Telephone No. +49 89 2399 8455 	

## **VII. CERTAIN DEFECTS IN THE INTERNATIONAL APPLICATION**

4.1 Independent claims should be in the two-part form in accordance with Rule 6.3(b) PCT, with those features known in combination from the prior art (Beard P. C. et al.) being placed in the preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).

4.2 The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

**V. REASONED STATEMENT UNDER RULE 66.2(a)(ii) WITH REGARD TO  
NOVELTY, INVENTIVE STEP OR INDUSTRIAL APPLICABILITY**

**1. Article 33(2) PCT**

**Closest prior art:** the probe disclosed in Beard P. C. et al.: 'Optical fiber photoacoustic-photothermal probe', Optics Letters, vol. 23, no. 15, 1 august 1998, 1235-1237 (cited in the application and the International Search Report). This document discloses

- a probe for the excitation of a sample to produce an acoustic signal and for analysis of the signal (p. 1235, 2nd column), comprising: an excitation source which provides a pulsed laser output (see Fig. 1 and p. 1236, 2nd paragraph); an optical fibre having a core (see Fig. 1), and an outer cladding (see Fig. 1), the pulsed laser output being supplied to the core at a first end of the optical fibre (see Fig. 1), the second end of the optical fibre being provided with an interferometer film which is substantially transparent to the laser pulses (PET film, see Fig. 1 and p. 1235, 2nd column), a signal produced in the sample modulating the thickness of the film (p. 1235, 2nd column); and a light source and detector assembly which provides an interferometer signal to the core at the first end of the fibre and detects the modulated reflected signal received from the core (see Fig. 1 and p. 1236, 2nd paragraph).

**Distinguishing features of the present application:**

- separation into inner and concentric outer core;
- pulsed laser signal is provided via outer core;
- interrogation light (for probing interferometer signal) is provided via inner core.

All claims meet the requirements of Article 33(2) PCT.

**2. Article 33(3) PCT**

**Problem:** provision of a optical fibre probe with enhanced sensitivity.

**Solution:** by the combination of features of independent claim 1. No indication leading to the proposed solution is given in the presently available prior art documents.

All claims meet the requirements of Article 33(3) PCT.

**3. Article 33(4) PCT**

All claims fulfill the requirements of Article 33(4) PCT.